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**United States Patent** [19]**Reiners et al.**[11] **Patent Number:** **6,138,815**[45] **Date of Patent:** **Oct. 31, 2000**[54] **CONVEYOR SYSTEM FOR  
LOAD-CARRYING CARTS**[76] Inventors: **Herbert Reiners**, Strasse 47A, D-58256  
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Morristown, N.J. 07960[21] Appl. No.: **09/309,687**[22] Filed: **May 11, 1999****Related U.S. Application Data**

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[51] Int. Cl.<sup>7</sup> ..... **B65G 19/02**[52] U.S. Cl. .... **198/321; 198/721; 198/726;  
198/867.14**[58] Field of Search ..... 198/321, 326,  
198/721, 726, 867.14, 419.2; 186/64[56] **References Cited****U.S. PATENT DOCUMENTS**

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Bondell LLP[57] **ABSTRACT**

A cart conveyor system for the transport of load-carrying carts, as frequently used in airports, supermarkets, etc. up and down inclined pathways. The cart is provided with front and back wheels with different spacing, and the conveyor has separate tracks for the front and back wheels, arranged to support the wheels in a manner that maintains the cart in a generally horizontal orientation as it moves up or down the conveyor path. The cart is engaged adjacent one end by laterally opposed conveyor elements, which advance the cart along the incline. At the other end of the cart, a retaining element extends downward and is engaged by a retaining track to prevent tipping of the cart as it is moved along the conveyor path.

**24 Claims, 10 Drawing Sheets**